

REMARKS/ARGUMENTS

Applicant would like to thank the Examiner for the careful consideration given the present application.

Applicant respectfully requests that the Examiner acknowledge that copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau, by checking box “3” under paragraph 12 on the next Office action summary sheet.

Claims 1 and 2 were rejected under 35 U.S.C. 112, second paragraph, for reciting the term “window.” The Examiner is again reminded that the requirement to distinctly claim means that the claim must have a meaning discernible to one of ordinary skill in the art. Only when a claim remains *insolubly ambiguous without a discernible meaning after all reasonable attempts at construction* should a claim be declared indefinite. See MPEP § 2173.02. The structural and functional relationship of the window 5 to the ultrasonic diagnostic apparatus is clearly shown in the figures and described in the specification, and claims 1 and 2 discuss a window in contact with a test subject and having a surface. As used in the specification and claims, the term “window” has a clear meaning that is readily discernable to one of ordinary skill in art. Moreover, the term “window” already had a clear meaning in the pertinent art when the subject application was filed. See, e.g., Greenstein (US 5,052,393), Enjoji (US 4,807,634), and Adams (US 4,762,002). The term “window” is recited over 60 times in the Ramamurthy reference cited by the Examiner and can be found in its claims. The terms “window” and “lens” appear together in various sentences in Ramamurthy in the alternative (i.e., “lens or window”). Contrary to the Examiner’s assertion in the Office action at page 2, Ramamurthy’s “lens” does not further define “window,” it is an alternative to a window.

The Examiner asserts that the term "window" can have different meanings (citing Slayton, US 6,623,430, which discusses a windowed region of a waveform) and, therefore, is indiscernible to one of ordinary skill in the art without further definition. The proper analysis is not whether a term can have different meanings. Many, if not most, English words must be read in context to discern their intended meaning. The proper analysis as set forth in the MPEP is whether a claim remains insolubly ambiguous without a discernible meaning after all reasonable attempts at construction. In the present application, claims 1 and 2 are discernable and properly apprise one of ordinary skill in the art of their scope. Therefore, claims 1 and 2 serve the notice function required by 35 U.S.C. 112, second paragraph. Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. 112, second paragraph.

Claims 1-4 were rejected under 35 U.S.C. 102(e) as being anticipated by Ramamurthy. The Examiner considered the applicant's declaration under 37 CFR 1.131 (submitted August 1, 2007) to be ineffective to overcome the Ramamurthy reference. Applicant respectfully requests reconsideration for the following reasons. The present application claims priority to Japanese patent application 2003-191700, which was filed on July 4, 2003. As can be seen from the declaration, a substantially complete draft of JP 2003-191700 was prepared and transmitted to the assignee of the present application, Matsushita Electric Industrial Co., Ltd., on June 20, 2003. Therefore, applicant conceived of the invention prior June 23, 2003, which is the earliest possible effective date of the Ramamurthy reference.

After transmission to the assignee, the draft application was reviewed by the applicant and the assignee and amendments to the claims were made. The application was subsequently filed in Japan (JP 2003-191700) on July 4, 2003. Merely two weeks passed between the transmission of the draft application to the assignee and the filing of the Japanese application. In

that two week period, the application was reviewed, claim amendments prepared and the application filed. Clearly, the applicant was diligent between June 20, 2003 and July 4, 2003 in preparing and filing the application. It is diligent to review, amend and file a patent application within a mere two week period. Therefore, applicant's declaration under 37 CFR 1.131 establishes conception of the invention prior to June 23, 2003 and diligence in constructively reducing the invention to practice beginning prior to June 23, 2003, which proves invention of the claimed subject matter by the applicant prior to the effective date of the Ramamurthy reference. Applicant respectfully requests reconsideration and withdrawal of the rejections under 35 U.S.C. 102(e).

Although unnecessary in view of the declaration under 37 CFR 1.131, applicant traverses the rejections of claims 1-4 as being anticipated by Ramamurthy for the following reasons. Claim 1 recites in part, "calculating the sound velocity of ultrasonic waves based on the difference between the reflex time of ultrasonic wave reflected from the inner surface of a window in contact with a test subject and the reflex time of ultrasonic wave reflected from the outer surface of the window and the thickness of the window." Claim 1 requires a difference between two wave reflex times, one from a wave reflected from the inner surface of a window and one from a wave reflected from the outer surface of the window. Ramamurthy does not teach the noted limitations of claim 1. Ramamurthy merely teaches a time delay after a transmit event and using time-of-arrival to estimate window temperature (10:17-19, 32-34). Ramamurthy is silent with respect to calculating a sound velocity based on a difference between a reflex time of ultrasonic wave reflected from an inner surface of a window and a reflex time of ultrasonic wave reflected from an outer surface of a window. The Examiner asserts that Ramamurthy "teaches calculating the temperature based on the thickness of the window/lens (t_1) and the

propagation velocity (v_1),” from which “a temperature of the window is calculated.” However, the teachings cited by the Examiner do not teach calculating a sound velocity based on a difference between a *reflex time of ultrasonic wave reflected from an inner surface of a window* and a *reflex time of ultrasonic wave reflected from an outer surface of a window*. Applicant submits that Ramamurthy does not anticipate claim 1, and respectfully requests that the rejection be withdrawn. Claim 3 depends from claim 1 and, therefore, claim 3 is not anticipated by Ramamurthy.

Claim 2 recites, “calculating the sound velocity of ultrasonic waves based on the reflex time of ultrasonic wave passing through fluid wherein sonic elements vibrate and reflected from the inner surface of a window in contact with a test subject and the thickness of the fluid.” Ramamurthy does not teach or suggest calculating a sound velocity *based on a thickness of a fluid* wherein (i.e., in which) sonic elements vibrate. Ramamurthy teaches that “some transducer lens or window materials acoustically match well to water, gel or tissue” and that “vary [*sic*] little reflected signal is provided from the lens or window surface for such materials” (11:63-66). Ramamurthy also teaches that “a lower frequency excitation signal...is used to provide a larger reflection from the lens or window surface” (12:1-3). Additionally, Ramamurthy teaches, “variations in the lens or window surface reflection coefficient, such as caused by air versus gel or tissue contacting the lens or window, are removed or accounted for by using a curve fitting approach” (12:66-13:2). Applicant submits that the water or gel discussed in Ramamurthy does not teach or suggest “fluid wherein sonic elements vibrate,” as required by claim 1. Further, Ramamurthy does not teach or suggest calculating a sound velocity based on a thickness of such a fluid. Applicant submits that Ramamurthy does not anticipate claim 2, and respectfully

requests that the rejection be withdrawn. Claim 4 depends from claim 2 and, therefore, claim 4 is not anticipated by Ramamurthy.

Claim 1 was rejected under 35 U.S.C. 102(b) as being anticipated by Umemura. The Office action discusses what Umemura teaches without explaining how Umemura teaches all of the claimed limitations. Applicant's attorney has thoroughly reviewed Umemura and respectfully submits that Umemura does not anticipate claim 1. For example, Umemura does not teach a difference between a reflex time of ultrasonic wave reflected from the inner surface of a window in contact with a test subject and the reflex time of ultrasonic wave reflected from the outer surface of the window. Therefore, Umemura does not anticipate claim 1 and the rejection of claim 1 should be withdrawn.

In light of the foregoing, it is respectfully submitted that the present application is in condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. NIHE-39088.

Respectfully submitted,
PEARNE & GORDON, LLP

By: 
Brad C. Spencer, Reg. No. 57076

1801 East 9th Street
Suite 1200
Cleveland, Ohio 44114-3108
(216) 579-1700
Date: December 26, 2007